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EXAMINER

CHIANG, JACK

ART UNIT PAPER NUMBER

2642

DATE MAILED: 02/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/594816

Applicant(s)

J. Anderson

Examiner

J. Chiang

Group Art Unit

2642

#10

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

## Period for Response

A SHORTENED STATUTORY PERIOD FOR RESPONSE IS SET TO EXPIRE - 3 - MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a response be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for response specified above is less than thirty (30) days, a response within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for response is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to respond within the set or extended period for response will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

## Status

- ☐ Responsive to communication(s) filed on \_\_\_\_\_.
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- ☐ Claim(s) \_\_\_\_\_ is/are pending in the application.  
Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- ☐ Claim(s) \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
  - ☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been received.
  - ☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.
  - ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_.

## Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_
- ☒ Notice of References Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other \_\_\_\_\_

Office Action Summary

**CLAIMS**

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-3, 5-11, 13-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Clark (US 6134336).

Regarding claim 1, Clark shows:

A driver (402-404);

An acoustic horn (116, see fig. 5) having an acoustic impedance matched with impedances of an ear and the driver in order for the user to put the horn again the user's ear (col. 2, lines 1-9, col. 6, lines 48-60), wherein the acoustic horn (see fig. 5) has a cross-sectional area that generally increases from a small end (with 402, 404) proximate the drive to a large end (with 118).

Regarding claim 5, Clark shows:

An acoustic horn (116, see fig. 5) having an acoustic impedance matched with impedances of an ear and the driver in order for the user to put the horn again the

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user's ear (col. 2, lines 1-9, col. 6, lines 48-60), wherein the acoustic horn (see fig. 5) has a cross-sectional area that generally increases from a small end (with 402, 404) to a large end (with 118).

Regarding claim 7, Clark shows:

A body (100, see figs 1 and 5);

A driver (402-404);

An acoustic horn (116, see fig. 5) having an acoustic impedance matched with impedances of an ear and the driver in order for the user to put the horn again the user's ear (col. 2, lines 1-9, col. 6, lines 48-60), wherein the acoustic horn (see fig. 5) has a cross-sectional area that generally increases from a small end (with 402, 404) proximate the drive to a large end (with 118).

Regarding claims 2-3, 6, 8-11, 13-15, Clark shows:

A plate having holes (118, 126);

The horn and its impedance matching (see comments in claim 1);

A driving membrane (402);

The horn can be integrally formed with the body (figs. 1 and 5);

The telephone body (100) having an elongated shape;

A microphone (a phone feature).

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3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clark.

Regarding claims 4 and 12, Clark shows a speaker assembly which usually have a membranes (i.e. 402).

Clark differs from the claimed invention in that it does not explicitly mention that the membranes has a diameter less than 1 mm.

However, from the present specification, pages 5 last paragraph, it discloses that the diameter of the membranes can be ranging from 1mm to 5mm, or even larger. In other words, there is no teaching of criticality for the specific claimed 1mm. Therefore, it would have been obvious for one skilled in the art to use any speaker technology, including the 1mm-diameter membranes, in Clark, as long as the basic concept of providing an acoustic frequency response that is substantially efficient within the practice of the phone operation (see background in Clark).

5. Claims 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clark in view of Yosimoto (US 6381126)

Regarding claims 16-19, Clark shows the speaker assembly with a phone device.

Clark differs from the claimed invention in that it does not explicitly mention the application of the speaker assembly with devices like a PC, pager and PDA.

However, it is commonly seen that today's electronic device have multiple functions, such as a phone having a PC, pager and PDA functions etc., or phones, PC, pagers and PDA having a speaker function. This is shown by Yoshimoto (col. 8, lines 17-25). Further, from the various applications claimed in the present application, such as the phone, PC, PDA, pager etc., it can also be seen that there is no teaching of criticality for any one particular environment. Therefore, it would have been obvious for one skilled in the art to use Clark's speaker design concept in the phone, or PC, or PDA etc. with/without the teaching of Yoshimoto. This is simply an intended use of Clark's speaker concept because a phone having a PC or PDA function would not change the operation of the speaker function.

### **ARGUMENT**

6. In response to the remarks (pages 5-6), Rabe and Warnke are withdrawn. Therefore, no great detail discussion is made regarding Rabe and Warnke. Argument is answered in the rejections above.

However, applicant (Mr. Savage, the attorney of record) continues to argues that "Rabe ... does not fully provide impedance-matching as claimed". In fact, during an interview dated on 18 June 2003, the inventor (Mr. Anderson) and the examiner agrees that Rabe's speaker design having an acoustic impedance matched with impedance of an ear and the speaker driver. The difference between the current application and the

Rabe reference is the physical design of the "horn" (Mr. Anderson) and the "wave guide" (Rabe). With the Rabe's design, the speaker has to be larger, and with Mr. Anderson's design, the speaker is smaller (Mr. Anderson says so in the interview), however, the acoustic impedance matched with impedance of an ear and the speaker driver in both Rabe and Mr. Anderson's design (Mr. Anderson says so in the interview). It is a common sense that is not spelt out in the Rabe reference, and it is applied to handsets in general, because if the impedances are not matched, it would not be comfortable when the phone is put against the user's ear, and this common sense is confirmed by the current inventor, Mr. Anderson. It seems like Mr. Savage (attorney) continues arguing something contradicting Mr. Anderson (the inventor).

7. Applicant's arguments with respect to claims 1-19 have been considered but are moot in view of the new ground(s) of rejection.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jack Chiang whose telephone number is 703-305-4728. The examiner can normally be reached on Mon.-Fri. from 8:00 to 6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ahmad Matar, can be reached on 703-305-4731. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Jack Chiang  
Primary Examiner  
Art Unit 2642